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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/041,699	01/08/2002	Thad Heckman	6210-000005	5455

7590 10/07/2003

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EXAMINER

NGUYEN, SANG H

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 10/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,699

Applicant(s)

HECKMAN

Examiner

Sang H Nguyen

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other _____

DETAILED ACTION

Answer to Arguments With Traverse

Applicant's election filed on 08/27/03 with traverse of Group II (claims 5-19) is acknowledge. The traverse is on the ground(s) that Group I (claims 1-4) and Group II (claims 5-19) directed to an apparatus for depicting contour lines on the surface of a model. This is not found persuasive because applicant only argues on the preamble of independent claims 1, 5, 9, 13, and 19 disclose an apparatus for depicting contour lines on the surface of a mode, while the body of claims is not related to preamble, for example, claim 1 (Group I) recites that a bed for supporting the model and at least one laser for projecting a plane of light at a predetermine height from the bed, wherein the details of claim 1 have different from the details of claims 5, 9, 13, and 19. For example, the details of claim 5 recites that a horizontal surface, at least one vertical sidewall at least partially surrounding the work surface, a reflector on at least a portion of the side wall, and at least one laser source for projecting a fan shape beam across the horizontal surface to the reflector. The inventions are distinct from each other, the restriction is based on the preamble and body claims, the argument is clearly unpersuasive because it ignores the standards of MPEP section 803 that defines what shows a serious burden of search and examination. Thus, the examiner has satisfied the requirement of MPEP section 808.02 on basis of different search, separate classification, and examination (see previous restriction).

The requirement is still deemed proper and is therefore made FINAL.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “**a modeling area and a non-modeling area at least one window in the interior wall**” in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoll (U.S. Patent No. 3,742,620) in view of Kofman et al (U.S. Patent No. 6,542,249).

Regarding claims 5, 9, 12-13, and 19; Knoll discloses a method and apparatus for depicting contour lines on the surface of a model, comprising:

- a generally horizontal surface (14, 18 of figure 1) for supporting a model (figure 1), and

- at least one vertical sidewall (10 or 13 of figure 1) at least partially surrounding the work surface (14, 18 of figure 1). See figures 1-4.

Knoll teaches all of features in claimed invention except for a reflector and at least one laser for projecting a fan shape beam across the horizontal work surface to the reflector. However, Kofman et al teaches that it is known in the art to provide at least one laser considered to be a multi-line projector (2 of figure 4) preferred using diode laser light projector (col.7 lines 2-3) and a reflector considered to a mirror or prism (col.7 lines 1-5) for projecting a fan shape beam (figures 1 and 4) across the horizontal work surface or contour lines (figure 4) of the object (5 of figure 4). See figures 1-15.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine a method and apparatus for depicting contour lines on the surface of a model of Knoll with a reflector on at least portion of the sidewall and at least one laser for projecting a fan shape beam across the horizontal work surface to the reflector as taught by Kofman et al for the purpose of visualizing the contours or profiles of the object.

Regarding claims 6-9, 10-11, and 14-17; Knoll discloses all of features in claimed the invention except for a plurality of laser sources at different heights to work surface. However, Kofman et al teaches three laser sources (2 of figure 4) at different heights to work surface of the object (5 of figure 4). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine a method and apparatus for depicting contour lines on the surface of

a model of Knoll with a plurality of laser sources at different heights to work surface as shown in the device of Kofman et al for the purpose of generating or emitting light beam to different heights of surface object.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Davis (6,556,211) discloses method for contrasting architectural models including scaled surface textures; Benedict et al (5,953,130) discloses machine vision methods and apparatus for machine vision illumination of an object; Welsh (4,970,666) computerized video imaging system for creating a realistic depiction of a simulated object in an actual environment; Sorenson et al (4,951,151) discloses image display system and method; Macovski (3,749,493) discloses method and apparatus for producing a contour map of a surface area; Daimon et al (JP 08 220 979) discloses method and device for deciding position of side window of house; Murakami et al (JP 04 121 778) discloses parallel sun light generation device; Shirakawa et al (10 153 960) discloses diversification visual recognition system for housing shapes; or Fujisaki et al (JP 09 325 691) discloses display device for house matching town environment.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Sang Nguyen whose telephone number (703) 308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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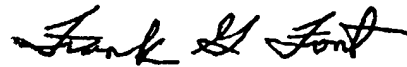
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Supervisor, Mr. Frank Font, can be reached on (703) 308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 or 7724.

Nguyen/ sn



September 11, 2003



Frank G. Font
Supervisory Patent Examiner
Art Unit 2877
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